UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _01 March 2010_.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _22-37_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) _22-37_ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a) ☐ All   b) ☐ Some * c) ☐ None of:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Applicant's response dated March 1, 2010 responding to the Non-Final

Office action mailed November 27, 2009 provided in the rejection of claims 22-

37.

Claims 22-37 remain pending in the application and which have been fully

considered by the examiner.

Applicant's arguments with respect to claims rejection under 35 U.S.C. § 103

obviousness based upon Knight-2 in view of De Boer have been fully considered but

are moot in view of the new grounds of rejection – see *Richard J. Kacel* - art made of

record, as applied hereto.

Claim Rejections – 35 USC § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject matter
> sought to be patented and the prior art are such that the subject matter as a whole would
> have been obvious at the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be negatived by the manner
> in which the invention was made.

2.   Claims 22-31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Knight et al. (Pub. No. US 2003/0167345 A1) (hereinafter 'Knight-2') in view

of Richard J. Kacel (Pub. No. US 2003/0120395 A1) (hereinafter 'Kacel' - art

made of record)

3.   **As to claim 22** (Previously Presented), Knight-2 discloses a software

management system for use in a vehicle, comprising:

- a portable memory device adapted to store software files and diagnostic

  information (e.g., [0190] - ... in <u>USB adapter</u> 200 capability for

  <u>downloading the updated calibration software</u> ... USB adapter 200 may be

  used to interface remote computers to other vehicle systems ...; page 29,

  Right-Col., Lines 6-11 – providing <u>a resulting measured voltage value</u> to

  said PDA via <u>a diagnostic message</u> .... – emphasis added);

- multiple vehicle processors connected to a system bus of the vehicle (e.g.,

  Fig. 1A, elements 102 – Fuel System Control Computer (vehicle

  processor), 104 – Transmission Control Computer (vehicle processor),

  106 – Data Logging Control Computer (vehicle processor), 108 –

  Communication Network (a system bus of the vehicle); [0141] - ... Vehicle

  control system includes: fuel system control computer, transmission

  control computer, data logging control computer, and vehicle

  communications network ...); and

- a communications port of the vehicle (e.g., Fig. 2, element 202 – USB

  Controller, Port 1, Port 2, Port 3);

- an interface processor (e.g., Fig. 2, element 204 – CPU; [0152] - ... USB

  adapter includes: USB controller, central processing unit ...) connected to

  the communications port and the system bus, wherein the interface

  processor is adapted to, when the portable memory device (e.g., Fig. 1B,

  element 112 – USB Device) is connected to the communications port:;

- an external processor having a communications port (e.g., Fig. 1B,

  element 110 – USB Host; [0149] - ... USB Host may be any computer

  having a USB host controller, such as <u>a standard PC</u> ...) and adapted to

  receive the diagnostic information from the portable memory device (e.g.,

  page 29, Right-Col., Lines 6-11 – providing <u>a resulting measured voltage</u>

  <u>value</u> to said PDA via <u>a diagnostic message</u> .... – emphasis added);

- identify software files stored on the portable memory device for each of

  the multiple vehicle processors, load the identified software files onto the

  multiple vehicle processors (e.g., [0910] - USB adapter capability for

  <u>downloading the updated calibration software from a remote computer to a</u>

  <u>vehicle subsystem computer</u> ... may be used to interface remote

  computers <u>to other vehicle sub-systems</u>, such as applications involving

  transmissions, anti-lock braking systems, vehicle management computers,

  and the like – emphasis added);

Further, Knight-2 discloses an USB adapter and associated communication

ports (e.g., Fig. 2; [0152]), associated USB device, and USB Host (e.g., Fig. 1B,

elements 110- USB Host, 112 – USB Device), providing a resulting measured

result to remote system by USB controller (e.g., P. 29, Left-Col., Lines 50-57) but

does not explicitly disclose other limitations stated below.

However, in an analogous art of *Method and System for Managing Vehicle*

Control Modules through Telematics, Kacel discloses:

- each adapted to generate diagnostic information indicating success of

  software installation on the respective vehicle processor (e.g., [0032] –

Each control module 130, 132, 134 may be characterized by a

microprocessor [*interpreted as the respective vehicle processor*], memory

and an application program memory storage …; [0033] - … information

may be communicated over data bus 115 from one or more of modules

130, 132, 134 …; [0062] - … be enabled to do a system wide test of all

connected control modules …; [0069] - … used to gather information

about a given control module's functioning …; [0080] – The software data

may also include commands … to test a given control module's efficacy or

functions. This may be particularly useful as a diagnostic test [*interpreted

as generating diagnostic information*] …; [0084] - … be enabled to test a

control module to determine if the module is functioning – emphasis

added);

- to analyze the diagnostic information to determine successful software

  installation on the vehicle (e.g., [0069] - … to test a newly installed control

  module's efficacy or functions …; [0073] - … may determine that the

  control module 130, 132, 134 is functional if the control module is able to

  perform a predetermined set of functions [*interpreted as diagnostic tests*]

  … to test a control module to determine if the module is functioning –

  emphasis added)

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Kacel into the Knight-

2's system to further provide other limitations stated above in the Knight-2

system.

The motivation is that it would further enhance the Knight-2's system by taking, advancing and/or incorporating the Kacel's system which offers significant advantages of means for remotely issuing a command for the at least one vehicle function, from <u>the communication node</u> to <u>the control module</u> as well as means for <u>updating existing software for controlling the vehicle function</u> as once suggested by Kacel (e.g., [0020] – emphasis added)

Furthermore, Knight-2's discloses transmitting diagnostic information received from the multiple vehicle processors to the portable memory device (e.g., Fig. 1B, element 112 – USB Device)

4.   **As to claim 23** (Previously Presented) (incorporating the rejection in claim 22), Knight-2 discloses the system wherein the communications ports of the vehicle and the external processor comprise open architecture communication ports (e.g., Fig. 1B, elements 200 - USB Adapter, 110 - USB Host, 108 – vehicle communications network; [0146] – Vehicle communications network is a collection of one or more computer networks that facilitate communications between network nodes …)

5.   **As to claim 24** (Previously Presented) (incorporating the rejection in claim 23), Knight-2 discloses the system wherein the communications ports of the vehicle and the external processor comprise universal serial bus ports (e.g., Fig. 1B, elements 200 - USB Adapter, 110 - USB Host, 108 – vehicle communications network; Fig. 1B, elements 200 - USB Adapter, 110 - USB Host, 108 – vehicle

communications network; [0146] – Vehicle communications network is a

collection of one or more computer networks that facilitate communications

between network nodes …), the portable memory device comprises a universal

serial bus drive (e.g., Fig. 1B, element 112 – USE Device)

6.   **As to claim 25** (Previously Presented) (incorporating the rejection in claim

22), Knight-2 discloses the system wherein the portable memory device stores

software files for multiple vehicle types, and the interface processor identifies the

software files based at least in part on vehicle type (e.g., [0190] - … to include in

USB adapter capability for <u>downloading the updated calibration software from a</u>

<u>remote computer to a vehicle subsystem computer</u> … may be used to interface

remote computers <u>to other vehicle sub-systems</u>, such as applications involving

transmissions, anti-lock braking systems, vehicle management computers, and

the like)

7.   **As to claim 26** (Previously Presented) (incorporating the rejection in claim

22), Kacel discloses the system wherein the multiple vehicle processors generate

the diagnostic information by automatically performing self-tests on the installed

software (e.g., [0069] - … <u>to test a newly installed control module's efficacy or</u>

<u>functions</u> …; [0073] - … may <u>determine</u> that <u>the control module 130, 132, 134 is</u>

<u>functional</u> if the control module is <u>able to perform a predetermined set of</u>

<u>functions</u> [*interpreted as diagnostic tests*] … to test a control module to determine

<u>if the module is functioning</u> – emphasis added)

8.   **As to claim 27** (Previously Presented), Knight-2 discloses a vehicle

comprising:

- a communications port (e.g., Fig. 2, element 202 – USB Controller, Port 1,

  Port 2, Port 3);

- multiple vehicle processors connected to a system bus of the vehicle (e.g.,

  Fig. 1A, elements 102 – Fuel System Control Computer (vehicle

  processor), 104 – Transmission Control Computer (vehicle processor),

  106 – Data Logging Control Computer (vehicle processor), 108 –

  Communication Network (a system bus of the vehicle); [0141] - ... Vehicle

  control system includes: fuel system control computer, transmission

  control computer, data logging control computer, and vehicle

  communications network ...); and

- an interface processor (e.g., Fig. 2, element 204 – CPU; [0152] - ... USB

  adapter includes: USB controller, central processing unit ...) connected to

  the communications port and the system bus, wherein the interface

  processor is adapted to, when a portable memory device (e.g., Fig. 1B,

  element 112 – USB Device) is connected to the communications port:

- identify software files stored on the portable memory device for each of

  the multiple vehicle processors, load the identified software files onto the

  multiple vehicle processors (e.g., [0190] - ... to include in USB adapter

  capability for <u>downloading the updated calibration software from a remote</u>

  <u>computer to a vehicle subsystem computer</u> ... may be used to interface

remote computers to other vehicle sub-systems, such as applications

involving transmissions, anti-lock braking systems, vehicle management

computers, and the like);

- to transmit diagnostic information received from the multiple vehicle

  processors to the portable memory device (e.g., Fig. 1B, element 112 –

  USB Device)

Further, Knight-2 discloses an USB adapter and associated communication

ports (e.g., Fig. 2; [0152]), associated USB device, and USB Host (e.g., Fig. 1B,

elements 110- USB Host, 112 – USB Device), providing a resulting measured

result to remote system by USB controller (e.g., P. 29, Left-Col., Lines 50-57)

and USB adapter capability for downloading the updated software (e.g., [0190]),

but does not explicitly disclose other limitations stated below.

However, in an analogous art of *Common Platform for Use in Automotive*

Services, Kacel discloses:

- adapted to generate diagnostic information indicating success of software

  installation on the multiple vehicle processors (e.g., [0032] – Each control

  module 130, 132, 134 may be characterized by a microprocessor

  [*interpreted as the respective vehicle processor*], memory and an

  application program memory storage …; [0033] - … information may be

  communicated over data bus 115 from one or more of modules 130, 132,

  134 …; [0062] - … be enabled to do a system wide test of all connected

  control modules …; [0069] - … used to gather information about a given

  control module's functioning …; [0080] – The software data may also

include commands ... <u>to test a given control module's efficacy or</u>

<u>functions</u>. This may be particularly useful <u>as a diagnostic test</u> [*interpreted*

as generating diagnostic information] ...; [0084] - ... be enabled to test a

control module to determine if the module is functioning – emphasis

added);

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Kacel into the Knight-

2's system to further provide other limitations stated above in the Knight-2

system.

The motivation is that it would further enhance the Knight-2's system by

taking, advancing and/or incorporating the Kacel's system which offers significant

advantages of means for remotely issuing a command for the at least one vehicle

function, from <u>the communication node</u> to <u>the control module</u> as well as means

for <u>updating existing software for controlling the vehicle function</u> as once

suggested by Kacel (e.g., [0020] – emphasis added)

9.   **As to claim 28** (Previously Presented) (incorporating the rejection in claim

27), please refer to claim **23** as set forth accordingly.

10.   **As to claim 29** (Previously Presented) (incorporating the rejection in claim

28), Knight-2 discloses the vehicle wherein the communications port comprises a

universal serial bus port (e.g., Fig. 1B, elements 200 - USB Adapter, 110 - USB

Host, 108 – vehicle communications network; [0008] - … a Universal Serial Bus

(USB) port)

11.   **As to claim 30** (Previously Presented) (incorporating the rejection in claim

27), please refer to claim **25** as set forth accordingly.

12.   **As to claim 31** (Previously Presented) (incorporating the rejection in claim

27), please refer to claim **26** as set forth accordingly.

13.   **As to claim 32** (Previously Presented), Knight-2 discloses a vehicle

software installation method for use in vehicle assembly, comprising:

- an interface processor of a vehicle via a communications port of the

   vehicle (e.g., Fig. 2, element 204 – CPU; [0152] - … USB adapter

   includes: USB controller, central processing unit …), wherein the interface

   processor is connected to multiple vehicle processors of the vehicle via a

   system bus of the vehicle (e.g., Fig. 1A, elements 102 – Fuel System

   Control Computer (vehicle processor), 104 – Transmission Control

   Computer (vehicle processor), 106 – Data Logging Control Computer

   (vehicle processor), 108 – Communication Network (a system bus of the

   vehicle); [0141] - … Vehicle control system includes: fuel system control

   computer, transmission control computer, data logging control computer,

   and vehicle communications network …);

- establishing communication between the portable memory device and an external processor via a communications port of the external processor (e.g., Fig. 1B, element 110 – USB Host; [0149] - … USB Host may be any computer having a USB host controller, such as a standard PC …; Fig. 2, element 204 – CPU; [0152] - … USB adapter includes: USB controller, central processing unit …)

- employing the interface processor to identify, for each of the multiple vehicle processors (e.g., Fig. 1A, elements 102 – Fuel System Control Computer (vehicle processor), 104 – Transmission Control Computer (vehicle processor), 106 – Data Logging Control Computer (vehicle processor), 108 – Communication Network (a system bus of the vehicle); [0141] - … Vehicle control system includes: fuel system control computer, transmission control computer, data logging control computer, and vehicle communications network …), software files on the portable memory device, and to load the software files received over the communications port onto the multiple vehicle processors (e.g., [0190] - … to include in USB adapter capability for downloading the updated calibration software from a remote computer to a vehicle subsystem computer … may be used to interface remote computers to other vehicle sub-systems, such as applications involving transmissions, anti-lock braking systems, vehicle management computers, and the like);

- installing the software files on the multiple vehicle processors (e.g., [0190] - … to include in USB adapter capability for downloading the updated

calibration software from a remote computer to a vehicle subsystem

computer ... may be used to interface remote computers to other vehicle

sub-systems, such as applications involving transmissions, anti-lock

braking systems, vehicle management computers, and the like);

- transferring diagnostic information indicating success of software

  installation from the multiple vehicle processors to the portable memory

  device via the interface processor (e.g., Fig. 2, element 204 – CPU; [0152]

  - ... USB adapter includes: USB controller, central processing unit ...)

Further, Knight-2 discloses an USB adapter and associated communication

ports (e.g., Fig. 2; [0152]), associated USB device, and USB Host (e.g., Fig. 1B,

elements 110- USB Host, 112 – USB Device), providing a resulting measured

result to remote system by USB controller (e.g., P. 29, Left-Col., Lines 50-57)

and USB adapter capability for downloading the updated software (e.g., [0190]),

but does not explicitly disclose other limitations stated below.

However, in an analogous art of *Method and System for Managing Vehicle

Control Modules through Telematics,* Kacel discloses:

- analyzing the diagnostic information via the external processor to

  determine success of software installation in the vehicle (e.g., [0069] - ...

  to test a newly installed control module's efficacy or functions ...; [0073] -

  ... may determine that the control module 130, 132, 134 is functional if the

  control module is able to perform a predetermined set of functions

  [*interpreted as diagnostic tests*] ... to test a control module to determine if

  the module is functioning – emphasis added)

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Kacel into the Knight-2's system to further provide other limitations stated above in the Knight-2 system.

The motivation is that it would further enhance the Knight-2's system by taking, advancing and/or incorporating the Kacel's system which offers significant advantages means for remotely issuing a command for the at least one vehicle function, from the communication node to the control module as well as means for updating existing software for controlling the vehicle function as once suggested by Kacel (e.g., [0020] – emphasis added)

Furthermore, Knight-2 discloses a portable memory device adapted to store software files and diagnostic information (e.g., Fig. 1B, element 112 – USB Device);

14. **As to claim 33** (Previously Presented) (incorporating the rejection in claim 32), please refer to claim **23** as set forth accordingly.

15. **As to claim 34** (Previously Presented) (incorporating the rejection in claim 33), please refer to claim **29** as set forth accordingly.

16. **As to claim 35** (Previously Presented) (incorporating the rejection in claim 32), Knight-2 discloses the method further comprising employing a universal

serial bus drive as the portable memory device (e.g., Fig. 1B, element 112 – USB

Device)

17.   **As to claim 36** (Previously Presented) (incorporating the rejection in claim

32), please refer to claim **25** as set forth accordingly.

18.   **As to claim 37** (Previously Presented) (incorporating the rejection in claim

32), please refer to claim **26** as set forth accordingly.

Conclusion

19.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Ben C. Wang whose telephone number is

571-270-1240. The examiner can normally be reached on Monday - Friday, 8:00

a.m. - 5:00 p.m., EST.

    If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ben C Wang/   /Tuan Q. Dam/
Examiner, Art Unit 2192   Supervisory Patent Examiner, Art Unit 2192